

**NONAQUEOUS ELECTROLYTE AND SECONDARY BATTERY USING THE SAME****Publication number:** JP2002343426**Publication date:** 2002-11-29**Inventor:** HIBARA AKIO; HAYASHI TAKASHI; ISHIDA  
TATSUKAZU**Applicant:** MITSUI CHEMICALS INC**Classification:****- international:** *H01M10/40; H01M10/36; (IPC1-7): H01M10/40***- european:****Application number:** JP20010151858 20010522**Priority number(s):** JP20010151858 20010522**Report a data error here****Abstract of JP2002343426**

**PROBLEM TO BE SOLVED:** To provide a nonaqueous electrolyte which can realize a battery of superior safety, having a high flashing point and a superior service life property with little capacity lowering and deterioration in load characteristics, during high temperature storage as a decomposition reaction of a solvent is suppressed, and to provide a secondary battery containing this nonaqueous electrolyte. **SOLUTION:** The nonaqueous electrolyte contains the nonaqueous solvent including cyclic carboxylic acid ester, a sulfonic acid derivative, and a lithium salt. By using the electrolyte containing the cyclic carboxylic acid ester, the lithium salt such as LiPF<sub>6</sub>, and sulfonic acid derivatives, the nonaqueous electrolyte secondary battery can be provided, in which the deterioration in the load characteristics or resistance at a service life test including a high temperature storage test, is significantly suppressed. In addition, the nonaqueous electrolyte enables providing the nonaqueous electrolyte secondary battery of superior safety, having the high flashing point.

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